In re Patent Application of: Andrew Robert Clark
Application No.: 10/537,933
Office Action mailed on July 28, 2009

Examiner: Youssef, Adel Y
Confirmation No.: 8660
Art Unit: 2618

REMARKS

This amendment responds to the Office Action mailed on July 28, 2008.

Claims 31-37 and 44-61 are pending. Claims 31, 44, and 50 are amended.

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Introductory Remarks

The subject application is directed to transmission control protocol (TCP) used for data communications. In order to provide security against denial of service attacks and the like, a connection negotiation phase is required before the TCP handshake. Without a successful connection negotiation, a TCP handshake is unable to complete, thereby preventing connection.

10 As discussed hereinbelow, a SYN handshake packet is used to initiate a 3-way handshake after such negotiation.

Section 103(a) Rejection

All claims stand rejected under new grounds of rejection in which Subramaniyan (U.S.

15 Pub. No. 2005-0086349) is cited as a primary document in an obviousness rejection in view of Park et al. (U.S. Pub. No. 2002-0073322). Subramaniyan is newly cited.

As a threshold matter, Applicant denies that Subramaniyan is prior art to the instant application, and reserves the right to establish that it is not, in fact, prior art.

Next, the invention defined by the independent claims now pending is believed to

20 distinguish over the art of record, but for purposes of expediting prosecution, amendments are made to the independent claims to call out that the handshake packet is a SYN-packet to initiate a 3-way handshake.

To Applicant's understanding, none of the cited prior art discloses sending a connection request prior to the start of the 3-way handshake. In this regard, it is important to note that the

25 connection request is not only different than the 3-way handshake --which is also recited in the independent claims, it is a pre-cursor.

In Subramaniyan, a connection is established in the first instance using a 3-way handshake. Subramaniyan [0008] is unequivocal in explaining the steps taken to establish the TCP connection. Yet in this respect Subramaniyan is teaching the conventional steps that the

30 subject application avoids by having a negotiation preced the 3-way handshake. *See also* [0057]

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– [0058] for the mechanics of the 3-way handshake and [0068] which explicitly refers to an analysis of a packet to determine if it is a SYN or SYN+ACK for the purpose of *establishing* a TCP connection.

5   Subramaniyan does not teach or suggest any other mechanism for as a pre-cursor to establishing the TCP connection. To the contrary, Subramaniyan explains at [0062] – [0063] his methodology for establishing a TCP connection which suffers from exactly the problem addressed by the present invention and resolved by the claimed system and method. In particular, Subramaniyan undeniably teaches a system that completes "Listen" requests upon receipt of SYN packets and then passes any such packets received to the TCP/IP protocol driver.

10   The TCP/IP filter driver disclosed by Subramaniyan is inserted into the network stack to monitor TCP connections, but not in regard to establishing a connection. *See* [0043]-[0049] and [0052].

In summary, Subramaniyan does not disclose the use of a connection request prior to the 3-way handshake. Park does not teach or suggest this feature either. Accordingly,

15   reconsideration of the rejection of the independent claims is respectfully requested.

Further Comment Regarding Claims 50-55 and Dependent Claims 56, 59

In regard to claims 50-55, 56 and 59, these claims call out that the request message is an "IP datagram," and there is absolutely no suggestion in Subramaniyan to use IP datagrams in the

20   manner recited in claim 31 in which the request message is an IP datagram. The discussion in Subramaniyan refers to the TCP/IP stack, but there is no significance in this. IP is a higher level protocol that is used *after* a TCP connection has been established. These are not substitutes for each other, and it would not be the case that the skilled reader would simply decide to do something over IP that was previously done over TCP. In the case of Subramaniyan, it would

25   make no sense to take the 3-way handshake (which as noted above consists of TCP communications) and send a "connection request" portion --as argued by the Office -- over IP. In any event, the claims recite that the connection request is different than the 3-way handshake and used to ensure interoperability, backwards compatibility, etc. The proposed modification as suggested would interfere with a standards-based handshake, could result in a good portion of

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recipients being unable to process the mixture of protocol types, and the transmission could, in a worst case, be interpreted as some form of exploit/attack itself.
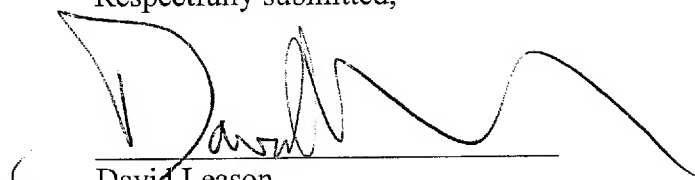
Applicant respectfully requests that all the rejections be withdrawn.

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Respectfully submitted,

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